

# DID AL-GHAZĀLÎ DENY CAUSALITY?

## TO THE MEMORY OF RICHARD WALZER

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The thesis Ghazâlî sets out to refute in his celebrated discussion of causality in the *Tahâfut al-Fâlâsifa* is not the doctrine that there exists some connection between cause and effect but the specific doctrine of the neo-Platonic Aristotelians whom he calls by the title they had arrogated to themselves, the Philosophers.

His words are worth remembering: "The first point of inquiry in their thesis that the connection observed in existence between causes and effects is a connection of necessary entailment and that it is not compassable (*maqdûr*) or possible for a cause to exist without its effect or an effect to exist without its cause." (1) Several points should be noted here: First, Ghazâlî refers to "the connection observed in existence" between causes and effects. The phrase 'in existence' will seem obscure to those familiar with the usage of the *Kalâm*. There the term 'existence' refers, as Maimonides makes clear, (2) to the created world, that is to the phenomenal or empirical world as distin-

(1) *Tahâfut al-Fâlâsifa* ed. Bouyges, 2nd ed., Beirut, 1962 (hereafter *TF*; citations from this source will be given by the page followed by the paragraph number). Where this edition differs from Bouyges' as given in his *Tahâfut al-Hâdîth* I have followed the latter. 191.5.

(2) *Dalâlat al-Hâdîth (Moreh Nevukhim)* *The Guide to the Perplexed*, Part I 73, premise 1, "the world as a whole, i.e. the bodies in it."

guished from the world of the divine which Ghazālī occasionally refers to by the term *Malakūt* or some similar designation. That is why Ghazālī refers here to *observed* causal relations despite his general assertion that the causal nexus between two events cannot be detected empirically.<sup>(1)</sup> His intention here is to exclude from his critical discussion the *unseen* causal relations which theology (considered among the 'ulūm al-dīn) may establish. Thus Ghazālī's discussion refers not to the question of whether the notion of causality is applicable in general but specifically to the question as to whether the Philosophers are correct in locating causal necessity within the phenomenal or empirical world.

Secondly the subject area marked out for inquiry is not that of causality altogether but specifically the Philosophers' doctrine or principle of causal necessitation. This thesis (*hukm*) is carefully stated for the Philosophers by Ghazālī in a rather strong form. It is not simply an assertion that causal relations involve necessity in some unspecified sense, but it is the thesis that the relation between the two is one of necessary entailment (*iqtiṣrān talāzum bi 'l-darūra*), i.e. that it is a logical relation. The Philosophers' claim that cause cannot exist without effect nor effect without cause is thus regarded by Ghazālī as restituting an alleged logical relationship, specifically a relationship of mutual implication, between cause and effect.

By stating the matter in this way Ghazālī puts a far more difficult burden of proof upon the Philosophers than on himself. For they must show according to the criteria of demonstration that Ghazālī sets up either that it is self-evidently impossible for cause to occur without its effect and vice versa or that some logically necessary train of reasoning requires this to be so. And, of course, Ghazālī believes that neither can be done. Ghazālī, for his part has only to show that the relations between empirical causes and effects are not those of strict logical implication—a far easier task. And the reason it is easier is that Ghazālī's stance here is far more relaxed than the position the Philosophers are called upon to defend. Yet it should not

be thought that no one held the position Ghazālī assigns to the Philosophers, and that he is simply refuting a straw man. On the contrary, the doctrine that causal relations were ultimately causal in the basis of their necessity can be traced back to Aristotle, it is an indelible feature of the system of physics and metaphysics conceived by Ibn Sīnā, and it is an explicit principle in the philosophy of Ibn Rushd.<sup>(2)</sup>

The argument which Ghazālī directs against the causal doctrine of the Philosophers is aimed at disproving the necessity of causal relations as claimed by the Philosophers: "The connection between what is customarily believed to be a cause and what is believed to be an effect is not a necessary one in my view."<sup>(3)</sup> Ghazālī here concedes that some connection or relation is to be found between cause and effect, for he does not assert that nexus within the subjectivity of what is customarily believed. The question at issue is not whether there is such a connection but whether or not it is between the presumed members of the familiar cause-effect pairs and whether or not it is a necessary one in the sense that the Philosophers claim. For Ghazālī concurs with the Philosophers that strictly speaking the term necessity has meaning only in its logical sense.<sup>(4)</sup> But he denies that causal relations have necessity in that sense: Rather each of the two [i.e. cause and effect] is not the other, for affirmation of neither implies that of the other, nor does the

(1) *Tahāfut al-Tahāfut* ed. Bouyges, Beirut, 1930 (hereafter *TT*; citations by page and line number) 520.9-524.1. The Avicennian scheme of tracing natural causes back to the celestial intellects was based upon Alexander of Aphrodisias' method of using the Aristotelian "intellects" to mediate between the monadic principle *Nous* and the particulars of nature. It is essential to the understanding of this scheme to recognize that for Ibn Sīnā as for Aristotle these celestial "intellects" were performing the function of translating logical into natural causes. It was for this reason that Plato himself conceived of their operation as some sense mathematical. Aristotle's belief that the motions of the heavens were necessary, invariant and eternal was based upon his faith that they were a choral dance which visibly expressed the unseen logic and mathematics of the intellects which governed them. For Ibn Rushd in the passage here cited it is quite clear that the intelligibility of nature depends upon the fact that nature's structure and behavior is the working out of a complex but quite unalterable causal scheme.

(2) *TF* 195.1

(3) *TF* 203.27.

(1) *TF* 196.5.

denial of either imply the denial of the other, so the existence of neither is implied by the necessary existence of the other, nor is the non-existence of either by the necessary non-existence of the other." (1)

Ghazālī's argument here it should be noted is not couched in the language of the *Kalām*, nor is his reasoning based upon the dialectical schemata of the *Kalām*. Rather both his reasoning and his style here are strictly Aristotelian. If event E is the logically necessary consequence of event C according to the doctrine of the Philosophers then the proposition that E occurs must logically entail the proposition that E occurs and vice versa. But such implications do not hold. This should be obvious on inspection for p does not imply q. But in case this is not obvious to an objector, Ghazālī considers the even plainer negative case: If the Philosophers claim that here p does not imply q, then it should be impossible i.e. self-contradictory, to affirm p while denying q. But such is not the case, thus it is impossible to deduce the occurrence of E from the occurrence of C or vice versa. Here Ghazālī uses no other basis for his argument beyond Aristotle's correspondence theory of truth (i.e. making the transition from events to propositions and back) and the Aristotelian rules of logical conversion in deducing that if two propositions imply one another a contradiction must arise from the affirmation of one and the denial of the other. No reference is made to the atomism of the *Kalām*, or to the *Kalām* occasionalism, or to *Kalām* notion that anything conceivable is possible. Rather the entire argument rests upon Aristotle's conception of identity and difference, for the cause is not the effect but the two are two distinct entities or events (*shay'ayni*), C and E neither of which is identical with the other. (This must be so if one is to account for or explain the other.) But if they are distinct, then the proposition p which affirms the occurrence of C cannot be identical with the proposition q which affirms the occurrence of E, so there need be no contradiction in affirming that p while denying that q, hence no relation of implication between p and q and no "necessary connection" between C and E.

Ghazālī's examples, which are offered for the sake of clarification, are not formally part of the argument. They simply illustrate the absence of a logical contradiction in the conjoined affirmation of a nominal cause with its nominal effect. Thus the slaking of thirst does not imply drinking, nor is it implied by drinking, nor is it contradictory to affirm either while denying the other. (If it is, Ghazālī challenges the Philosophers to explain why the contradiction is not self-evident or to deduce it from self-evident axioms.) It is important that Ghazālī does not here make it a part of his argument to say that e.g. the slaking of thirst is possible without drinking, etc., although he does believe that this is so, for this might lead to the confounding of the conclusion with the ground on which it is to be based. Rather he simply lists the nominal cause-effect pairs he offers as examples of the absence of any relation of implication between their members: "Slaking of thirst and drinking, satiety and eating, burning and contact with flame, light and sunrise, death and decapitation, cure and the taking of medicine..." etc. (1) The argument is entirely formal and strictly philosophical. In no way does Ghazālī allow his case to rest on theological considerations in the manner he ascribes to the *Kalām*. (2) The only mention of God in this context is in Ghazālī's tender of the divine plan as an alternate explanation for the collocation of the empirically familiar causal pairs: "The connection is on account of the prior ordination of God, who creates these things in sequence. It [i.e. the connection of cause-effect pairs in the empirical world] is not a result of its own intrinsic necessity." (3) Thus we have a causal nexus in empirically observed relations but not an intrinsically necessary one but rather a connection based on God's ordering of events.

This talk about God creating one event after another in sequence may sound suggestive of the occasionalism of the *Kalām*, but the notion of a causal nexus within nature is foreign

(1) *TF loc. cit.*

(2) See *Al-Munqidh min al-Dalāl* ed. Saliba and Ayyad, Damascus, 1939, 81-82.

(3) *TF* 195.1.

to the occasionalists, and the reference to divine pre-ordination of events is quite different from the *Kalām* method of dismissing natural causality. For it is quite compatible with Ghazālī's language here to speak naturalistically (as Maimonides later does) of an eternal divine plan for nature which orders causal as well as temporal sequences. But the question, we shall see, does not remain whether Ghazālī's discussion is compatible with acceptance of some form of natural causality, but whether it remains compatible with occasionalism.

The scope of Ghazālī's inquiry includes all causal attribution, but he chooses a single paradigmatic illustration with which rival accounts of causal relations must stand or fall: a piece of cotton is put in contact with flame. Ghazālī maintains the possibility of its not taking fire. He maintains further that the cotton can be reduced to ashes without contact with flame.<sup>(1)</sup> The Philosophers deny these possibilities. Ghazālī does not say that these events are probable or that their occurrence is familiar. His assertion must be interpreted in terms of his own definition of possibility and impossibility: only the self-contradictory is impossible; non-self-contradictory events cannot be ruled impossible *a priori*, as had been the intention of the Philosophers. Similarly with necessity: Where there is no logical relation of implication there is no necessity. Empirical events are not bound together by relations of logical correlation, despite the familiar suppositions of the mind, hence their relations are not those of necessity.

Having defined clearly the issue which separates him from the Philosophers as their affirmation and his denial of (logical) necessity in empirical causal relations, Ghazālī divides his discussion with them into three stages (*maqāmāt*)<sup>(2)</sup> the first

concerned with the locus of the true causal relation, the second with the necessity or lack of necessity which this involves, and the third with the limits of possibility and impossibility.

## I

The Philosophers raise the issue of causal efficacy in an effort to defend their concept of causal necessity. Their argument as stated by Ghazālī is that "the sole agent (*fā'il*) in effecting the burning is the flame, which acts by nature not by choice, and cannot refrain from the action which is its nature once it is in contact with the substrate receptive to it."<sup>(1)</sup>

We have here, in other words, all four of Aristotle's causal factors, the spark, the fuel, spoken of as a receptive substrate (*lēthos*) as having the disposition to burn, the formal "nature" or essence of flame, which of course cannot be otherwise so long as things are what they are (the Aristotelian essentialism construed as a principle of logic), and the end or entelechy of flame, which anyone can learn from its effects is to burn. The mode of causation is natural rather than voluntary, so there is no alternative but for nature to take its course and no outcome of the process but for the cotton to burn. But this result follows from the rigid application of Aristotelian assumptions, it does not follow from the concepts of flame and cotton in and of themselves.

Ghazālī is not so enthralled by the authority of the Aristotelian scheme as to be incapable of criticizing its most fundamental assumptions. This was a line of approach to Aristotelian doctrine which neither Aristotle nor any of his more fastidious followers was capable of understanding. Aristotle could not believe, for example, that Megarian philosophers in good faith

(1) *TF* 195.2.

(2) The term is borrowed from Sufi usage. Van Den Bergh obscures the dialectical connotation by speaking of three "points". In general, while commenting the magnitude of Van Den Bergh's undertaking in translating the entire *Tahāfut al-Tahāfut*, I must report that there are numerous glosses and errors in his version. The translations in the present article are my own, and readers who wish to compare the two interpretations with the original will probably find a certain consistency in Van Den Bergh's tendency to give more lucidity

Averroes' arguments than he does to Ghazālī's. The main reason, I think, is that Ibn Rushd's arguments and terms are much more familiar in the medieval repertoire than are Ghazālī's, whose argumentation tends to be more imaginative and whose terminology is very fluid. Beyond this there is a certain question of bias, as for example in rendering 'you' as "you theologians."

(1) *TF* 196.3.

might deny the reality of motion. He could only identify such claims with those of the Sophists and regard the arguments by which they were supported as sophistical. Ibn Rushd makes much the same sort of charges of sophistry, bad faith, and deception against Ghazālî in the present context. (1) Ghazālî however, presents no fallacious or sophistical arguments in this discussion. He merely points out the alternative doctrine which he holds, which is that the agent which effects the cinders and dissolution of the cotton is God, "either through the mediation of angels or without mediation, for the fire is inanimate and has no action." (2)

Once again the manner of presentation here may be somewhat misleading, especially the talk about angels. The argument however, is based upon strictly Aristotelian axioms, for it was Aristotle who had argued that all matter, by its intrinsic nature, is inanimate and therefore incapable of initiating any process. (3) The outcome of that argument was the search for a prime mover which led of course to the world of forms and disembodied celestial intelligences. Ghazālî was well aware of this fact, and even obliquely refers to the Philosophers' doctrine of the causal coordination of nature by the intelligences, through the forms, but he uses the Islamized terminology which refers to the non-material agents of change as angels rather than intelligences or forms. Still the response he gives is by no means incompatible with causality, since the position might well be that God acts through definite "principles" (angels) in the natural world, as contrasted with the atomistic position of the *Kalâm* which is here represented by the notion that God is the *immediate* author of all effects. Ghazālî does not here rule out either the causal or the occasionalistic alternative. His point however is that the Philosophers are inconsistent in assigning all causal efficacy to material objects while their cosmology refers all causal action to the non-material sphere.

(1) *TT* 519.12-520.9; *cf.* 30.14-31.8; *cf.* 485.15-486.3, 26, 37, 47, 116-117; cf. Aristotle, *Physics* I 3, 186a5, "both of them reason contentiously—I mean both Melissus and Parmenides."

(2) *TF* 196.4.

(3) *Metaphysics* lambda 6, 1071b29; *Physics* VII 1, etc.

The only evidence the Philosopher can offer of the efficacy of his supposed causes in producing their alleged effects is the observation of causal conjunction, the cotton ignites when the flame is placed in contact with it. But this is a case of the fallacy of *post hoc ergo propter hoc*, for what is observed is the simultaneity of the two events, not any actual causal bond between them. "Observation shows that the effect occurs at this time but not on this account or that there is no other cause." (1) Here again Ghazālî leaves open the possibility that observed causes are actual causes but not necessarily sole and sufficient causes. He does not deny the possibility that the flame contributes to the burning of the cotton but rejects the logic of the supposed inference from effect to cause and the fallacy of presuming that temporal contiguity reveals a causal connection at all, let alone the sole and sufficient cause of an observed effect.

Ghazālî's argument against the sufficiency of observed causes to produce their effects does not deny but rather exploits the Philosophers' emanative view of nature and assumes the rejection of a reductionistic view which might consistently have regarded material objects as self-sufficient in their causal action. The Islamic philosophers cannot regard "observed" causes as sufficient (*i.e.* capable of acting alone, unaided by non-material, intellectual, spiritual, or formal principles) because to do so would be to reject the very hylomorphism upon which their physics and their rationalistic naturalism rest. Even if matter had some innate or intrinsic properties not ascribed to the formal or intellectual ("angelic") sphere, as say in a neo-Empedoclean system, these elemental properties would not suffice, according to the anti-reductionistic standards of the neo-Platonic Peripatetics, to account for higher order properties such as life, perception, etc. "For there is no disagreement between us as to the fact that the soul and the perceptive faculties in the sperm of animals are not engendered by the natures which are confined to heat, cold, wet and dry, nor as to the fact that it is not the father who makes his son by depositing

(1) *TF* 196.5. The last clause is misconstrued by Van Den Bergh.

sperm in the womb—he does not make his life, his sight, his hearing, nor any of his other faculties." (1) In other words the four Empedoclean qualities, hot, cold, wet and dry, even if they are regarded somehow as intrinsic properties of matter (which is inconsistent with Aristotelian hylomorphism) are incapable singly or in combination of accounting for the effects which materialism would fater on their causal efficacy, for the alleged effects are qualitatively different from their presumed causes. (2) Similarly the simple act of ejaculation which precedes conception, development and parturition (and thus might be taken as their cause) is not their sufficient cause.

It might be supposed that these arguments become ineffective once the actual facts of chemistry and biology become known. Modern physical chemistry need not rely upon a mere four qualities, and modern physiology can trace the development of an embryo far beyond Ghazâlî's deposition of the sperm. To put the matter in this way however is to obscure the central point of Ghazâlî's argument. The ultimate physical properties dealt with in modern chemistry will be simpler not more complex than those of the quasi-Empedoclean system adopted by the Aristotelians. So the problem will remain of deriving higher properties such as life and sensitivity from the alleged elemental properties of the modern system. And even when we do succeed in relating properties such as life and consciousness to their bio-chemical basis, it still remains to ask, as Teilhard does, why nature should proceed in the direction of the more complex, why and how the inanimate can become capable of life and thought. Our contemporaries who are reductionistically inclined may profess to see no difficulty in the derivation of life and consciousness from the properties of matter, but Ghazâlî has the advantage that his Aristotelian opponents made themselves the champions of the anti-reductionistic cause by pointing

out precisely the sort of difficulty to which he was referring. It was inconsistent for them to point out the inadequacies of materialistic accounts of nature and then write of causality as though events in the physical world could be accounted for solely in material terms. The genuinely Aristotelian approach to the problem had been resort to the Platonic theory of forms, which treats all physical properties including the elemental ones as adventitious. Higher faculties such as life and perception then need not be reduced to elemental properties but can be treated by Ghazâlî as adventitious in precisely the manner in which Aristotle had insisted they must be: "It is known that they appear when the sperm is deposited, but we cannot say that they appear on account of it, but rather that their existence is traceable to the First, either immediately or through the mediation of angels charged with responsibility for these temporal matters." Once again Ghazâlî suggests his attachment to the non-Kalâm view of spiritual/intellectual "principles" charged (on a regular basis, thus naturalistically) with the administration of natural/temporal events. This view differs only verbally from that of the Philosophers themselves: "This is what is distinctly affirmed by those philosophers who speak of in Author [sc. of the natural world, Ghazâlî uses this term, *Sâni*], specifically to include the eternalist neo-Platonists] and it is with them that we are disputing." (1)

"The most insightful philosophers [*muhaqqiqûhûm*] agreed," Ghazâlî writes, "that the accidents and events which arise upon the contact of bodies and in general upon the alteration of the relations between bodies, emanate solely from the Bestower of Forms, which is an angel or angels..." (2) Here Ghazâlî not only reminds the Philosophers of the incompatibility of their position with the mechanistic view which their treatment of causality inconsistently invokes, but also reveals his own adherence to that theistic but nonetheless naturalistic view of theirs by equating the Form Giver of the Philosophers with its Islamized equivalent in rationalistic angelology. Here Ghazâlî

(1) *TF* 196.5.

(2) Cf. Ghazâlî's spectacular pair of examples in the *Munqidh*: the rationalist's inability to predict *a priori* the effects of fire and the incapability of the neo-Empedoclean physics to account for the physiological effects of opium (*Munqidh* pp. 156-157) illustrate the direction which his empiricism takes, but not the lengths to which it goes.

(1) *TF* 196.5.

(2) *TF* 197.7.

accepts emanation (as he does elsewhere in many places) and the regular governance of nature through the mediation of angels/forms/intelligences. His only quarrel with the Philosophers is over their departure from their own scheme.

Thus in the first phase of his dispute with the Philosophers as to causality Ghazālī makes two points (*a.*) that causal relation cannot be deduced from temporal contiguity and (*b.*) that confining causal explanations to the material world is inconsistent with the fundamental tenets of Aristotelian neo-Platonism as it developed in Islam. Or as he puts it, "It has been made clear that existence at the time of something does not indicate existence on account of that thing." (1) Even if the fact observed is regarded as having a causal contribution, a system which extends far beyond the particular observed phenomenon must be considered. By the Philosophers' own standards this system must include non-physical elements, ultimately a congeries of intellectual/spiritual *active* principles (to set in motion the intrinsic immobility of matter). And ultimately this system must be traced to a First Cause or Prime Mover (*al-Awwal*, as Ghazālī puts it here).

Nothing in any of this militates against the concept of causality, in fact that concept is presupposed. But its locus is reoriented not wholly as in the occasionalistic *Kalām* but systematically as in the doctrine of the Philosophers themselves, so that natural causal connections are regarded as expressions of the all-encompassing cosmic or divine causal scheme.

## II

As for causal necessity, Ghazālī writes, the dispute is "with those who grant that these temporal events stem from the first Principles of temporal events [i.e. the forms, angels, intelligences, call them what you will, here Ghazālī prefers a neutral term] but that the disposition to receive a form arises on account of these present causes which are observed, these Principles

themselves, however, being such that things issue from them by nature and necessity, not by way of choice and reflection [i.e. by free and intentional or conscious action] but as light flows from the sun, and that the substrates differ in their receptivity only on account of differences in their dispositions." (1) From the Philosophers Ghazālī cites an old example (2) to illustrate their position: The sun bleaches clothes but blackens faces. The principle, the Philosophers would argue, is the same but the effect is different, and the difference is explained by the different dispositions in the matter which serves as substrate for the reception of forms.

Following the Platonic scheme the Philosophers would treat "sameness" in general as the mark of form and attribute "difference" to the inherent limitations of matter. What Ghazālī is objecting to is the assumption of strict determinism with respect to the effects of the formal principles. For if the forms are simplex, as the Philosophers claim they are, and if the mode of issuance from them of all temporal effects is deterministic, then given the Philosophers' axiom that from the complex only the simplex can emerge, it follows that the Philosophers cannot account for the diversity of nature, paradigmatically for the diverse effects of a single simplex and deterministic operating cause. The variable dispositions of matter, which they had relied upon in this regard, are it must be recalled, themselves forms which must be traced to their first principles no less than any other definable characteristics of nature—unless of course it is to be claimed, contrary to all Aristotelian philosophy, that these properties are inherent in matter, a position the Aristotelians felt certain they could refute on the grounds that if these dispositions were essential to matter as such, then all matter would possess all of them. The only alternative in accounting for diversity in nature is to reject the automatic or necessitated model of the issuance of temporal reality from its first principles, for as Ghazālī reminds his

(1) *TF* 197.8.

(2) See *Sextus Empiricus Against the Physicists* I 246, *cf. Against the Logicians* I 192.

reader, (1) the strictly deterministic concept of emanation has been "amply refuted" by these and other arguments in the discussion of creation. (2)

Voluntarism then, in place of determinism with respect to the issuance of any given temporal event from the first principle, is the basis of one of the two approaches Ghazālī considers to the resolution of the question as to the status of claims about causal necessity.

"The answer," Ghazālī writes, "can be approached in two ways. The first would be for us to say, 'We do not grant that these Principles do not act by choice or that God does not act by volition, as we have amply refuted their claims on that score in discussing the question of the world's creation. If it is established that what produces the burning [i.e. God or the "Principles"] acts voluntarily to create burning upon the contact of the cotton with the flame, then it is possible rationally that this subject not create that effect, despite the occurrence of the contact.'" (3) Ghazālī's wording here is very carefully chosen. He speaks of the voluntarism he has established with respect to God in the First Discussion of the *Taháful al-Falásif* and considers the possibility of its extension to the intellectual and angelic principles which both he and the Philosophers regard as regulating the general causal patterns of nature. He seems to see no particular objection to such an extension of this voluntarism and goes on to consider its usefulness as applied to the particular question at issue: On the voluntaristic model there would be no contradiction even for an Aristotelian between stating that a cause had occurred and denying the occurrence of a set effect, since according to Aristotle, when the will is the cause, there may be more than one possible effect. Here too Ghazālī does not depart from an Aristotelian framework, although he does consider application of the volitional model where Aristotelians deny its applicability. Ghazālī does not state that the volitional model should be applied to the particu-

use of the cotton but only that there are grounds on which it might be desired to apply it (since it has been demonstrated in his view that no determinate feature of the world can be accounted for solely on the model of logical/natural necessitation) and that if it were to be applied there would be no contradiction in the conceptual impossibility in asserting the occurrence of C while denying that of E. But this absence of a contradiction is simply the point that he has already demonstrated in the first stage of discussion. Thus the application of the voluntaristic model is not needed to strengthen or confirm that point, but is simply one way of accounting for the alleged anomaly of causes not necessitating their effects (and vice versa) in terms of a category (the will) which the Philosophers themselves believe they understand.

Nonetheless, the voluntaristic approach to the task of resolving the sense of paradox which Ghazālī's denial of the Philosophers' causal thesis arouses is fraught with difficulties which press the issue beyond the question of the claimed lack of contradiction in the alternative position. Ghazālī considers these difficulties with a view to showing (a.) the lack of formal contradiction in the thesis they address, (b.) the presence of any genuine material difficulties in that thesis.

If it is said, 'But this leads to a commitment to the most monstrous absurdities [*muhdlat shant'a*; note 'leads to,' not 'implies'], for if you say that causes follow necessarily from their effects [*luzūm al-musabba* - 'an asbābihā'] and you refer the matter to the will of their ultimate originator, and that will has no specific and definite program but can vary and shift, then it is possible for any one of us to have before him running beasts, raging fires, towering mountains and armed foes without seeing them because God has not created the sight of them for him...'

Ghazālī couches this objection in the protasis of a conditional sentence, so that the response may be given in the apodosis in the manner of the *Kalām*. (Van Den Bergh's very natural desire to break up the long period that results obscures this syntactical point.) The objection is that if the pure arbitrariness of the divine will (as needed for the ultimate creation of all things) is introduced into the quotidian operations of nature, then experience will lack all continuity. For God in that case

(1) *TF* 198.15.

(2) *TF* I, 1st discussion.

(3) *TF* 198.10.

will directly control the determination of every temporal event in accordance with the pure arbitrariness of the divine will, or the objector claims:

'One who put down a book at home would have to allow that by the time he got back it might have turned into a bright, young, bearded servant lad busily going about his business, or into an animal. If he left a servant at home, he would have to allow that it was possible for him to change into a dog, or if he left ashes they might have changed to musk, or stone to gold or gold to stone. And if he were asked about any of these, he would be obliged to answer "I have no idea what is presently in my house. All I know is that I left a book there, but perhaps by now it is a horse and has spattered my library with its dung and staling. I did leave a loaf of bread at home but perhaps it has changed into an apple tree, for God has power over all things, and it is not necessary for a horse to be formed from sperm nor for a tree to be formed from seed or from anything." Perhaps things have been created which did not exist before. In fact, if one looks at a man one has not seen before and is asked "Was this man born?" one must remain uncertain and say. "It is conceivable that one of the fruits in the market turned into a man and this is he, for God has power over all things possible, and this is possible, so there is no avoiding uncertainty in this regard." This topic provides great scope to the imagination but this much is sufficient.' (1)

The difficulty posed by the objector is based upon the fact that the position suggested by the first line of approach seems to afford no basis for relating one event to another. God's will has been made so absolute a determinant of all states of affairs that not only causal continuity but physical continuity in nature is destroyed and there seems to remain no basis for the psychological continuity upon which human experience depends. Ghazālī has the putative objector heighten the sense that theologically there is something problematic in the position described by mentioning the question of dangers we should be unable to detect in case God did not create their sight along with their presence before us. This suggests that the occasionalist position here broached came in for similar criticisms in the early *Kalām*, where issues of theodicy were the dominant concern. For the Mu'tazilite, no matter how radical his occasionalism, he would feel the force of the contention that a just God would not (morally) could not fail to create in us the perception of manifest dangers.

(1) *TF* 198-199.12.

But despite the possibility of its criticism even from a *kalām* perspective (*a fortiori* from the more naturalistically inclined perspective of the Philosophers) the occasionalist position, which Ghazālī plainly regards as extreme, is not as ridiculous as the objector tries to make it appear, since the *Mutakallimūn* themselves had found that the continuity of experience might be introduced by God (as an act of grace) and need not depend on any necessary regularity in nature or in God's choices for the termination of "being." Thus in fairness to the occasionalists Ghazālī was compelled to show not only that their position contained no formal contradiction as the objection itself makes clear but also that it did not necessitate adoption of the notion that experience must be without continuity.

The answer would be for us to say, "These absurdities would follow if it were established that it is not admissible that knowledge might be created in a man of the non-occurrence of what is possible despite the fact that it is possible."

In other words a distinction must be made between the knowledge that the strange events referred to are possible and the belief that they are actual or even likely. "We have no difficulties on account of the images you conjure up, for God has created knowledge in us that he will not execute these possibilities, and we did not posit that these things were necessary but only that they were possible, they might or might not occur [in themselves they are contingent according to the *Kalām* doctrine, only God's free act can make them actual and determinate]. But we are so accustomed to their continued occurrence that their sequence, to which we have been habituated in the past, is indelibly engrained in our minds." (1)

It is quite clear that it is not the extreme occasionalist who applies this retort for the *Mutakallimūn*, although the idea that the expectation of the causal sequence is subjective was no doubt theirs, for the retort makes no pretence of adopting the occasionalist view, speaking interchangeably of God providing knowledge of what to expect and at the same time of the same knowledge as derived from past experience. The *ad hoc*

(1) *TF* 199.13.

character of the *Kalām* hypothesis, however, is made very clear by its application to the cases when miracles are alleged to have occurred: Here the occasionalism originally introduced as a means of justifying the concept of creation (by universalizing it as constant creation) becomes the basis of a purely *ad hoc* view of miracles: Just as one might know that a particular familiar possibility is not to be realized, a prophet might be prepared for the occurrence of the unexpected by God refraining from creating in him the expectation that events will follow their familiar course. (1)

Thus the view considered here is neither logically incoherent nor inconsistent psychologically with the coherence of experience. Nevertheless Ghazālī does not adopt it, for one of the central methodological differences between his work and that of the *Kalām* is that in Ghazālī's thought it is not sufficient for a view to provide a logically coherent means of saving the phenomena while justifying what are regarded as theologically desirable doctrines. There must also be good grounds for holding the view in question and the possibility of defending it against objections from all quarters of experience. This was the ultimate critical legacy bequeathed to Ghazālī by his youthful inquiring spirit, his intellectual initiation by the Ismailis, his long interlude of skepticism and his study of philosophy, and it was his respect for the standards of critical thinking which made him capable of controversy with the Philosophers on their own intellectual plane. In this regard it is very significant that Ghazālī confines his *ad hoc* conception of miracles to his statement of the *Kalām* position, which he does not accept.

The *Kalām* approach Ghazālī puts forward, unfortunately, has been identified with that of the Ash'arites and fused in turn with that of Ghazālī himself. (2) But this representation of requires more than a little qualification. What is Ash'arite in the reply Ghazālī supplies to the objections he considers, if

introduction of the Ash'arite concept of a mental habit and habitual or familiar course of nature. This notion would not make sense in purely occasionalist terms for it rests on the Ash'arite theory of created capacities or dispositions, by which 'arī introduced a qualified naturalism into the *Kalām*. In the notion that our knowledge of what to expect is provided by God and by empirical experience is characteristic of the Ash'arite approach to overdetermination as for example in the doctrine of *ikhtisāb* in which my actions are both my responsibility and God's. The type of viewpoint represented by the initial approach, however, i.e. the application of pure voluntarism to the quotidian processes of nature, unmitigated by the notion of divine custom, was not Ash'arite at all but was, as the objections to it reveal, the expression of an extreme form of occasionalism which Ash'arī himself did not accept, as we learn from his reports of it accompanied by identical sorts of objections to those Ghazālī cites only in greater number and more colorful variety—for, as Ghazālī writes, this topic affords great scope to the imagination. The approach in question, which Ghazālī believed could be rendered consistent with experience if qualified by the Ash'arite doctrine of mental custom, was represented in the early *Kalām* by such radical occasionalists as Sālih Qubba" and Abū Ḥusayn al-Sāliḥī.

Sālih was a radical predestinarian, the only Mu'tazilite, according to al-Ash'arī to accept divine creation of all human acts including sins and professions of unbelief. (1) Here is Sālih's account of his doctrine:

Sālih Qubba said "A man acts solely within himself. [This is drawn from the Stoic doctrine that we control only the inclination of our will, not its effects.] What occurs on the occasion of ['inda] action, such as the departure [there is no motion in the occasionalist *Kalām*] of the rock when thrown, the igniting of firewood when brought into collocation [there is no contact for atomists] with flame, the pain which accompanies beating, is created by God. It is possible for heavy stones to be suspended in thin air a thousand years, God not creating falling but rest in them. It is possible for wood to be conjoined with fire again and again without God creating burning, for mountains to

(1) *TF* 199-200.14.

(2) See Van Den Berg's notes to the *Tahāful al-Tahāful*, London, 1954, vol. I, p. 184, 329.5; cf. Majid Fakhry *Islamic Occasionalism and its Critique by Averroes and Aquinas*, London, 1958, pp. 46-47.

(1) Al-Ash'arī *Maqādīt al-Islamīyīn*, ed. H. Ritter, 2nd ed. Wiesbaden, 1963, (page and line) 227.10-12.

be set upon a man without his feeling their weight, for Him to create rest in a pebble when it is impelled by some one and not create an propulsion in it even if all the people of the earth pushed and stroked with it together. It is possible for God to burn a man in fire without his feeling pain, but God might create pleasure in him instead. It is possible for God to create [visual] perception along with blindness and knowledge [consciousness] along with death." Sāliḥ used to claim that it was possible for God to raise the weight of heaven and earth without subtracting anything from them, making all lighter than a feather. I have heard that it was said to him: "How do you know that at this very moment you are not in Mecca sitting under a dome which has been set over you but unaware of it, although you are perfectly sound, sane, and unimpaired, simply because God has not created knowledge of it in you?" And he replied, "I don't." And so he was nicknamed "Qubba" or the Dome. I have also heard that it was said to him regarding vision, what if he were in Basra but saw as though he were in China? He replied, "If I see that I'm in China, then I'm in China." And it was said, "And if your leg were tied to that of a man in Iraq and you saw as though you were in China?" He answered, "I would be in China even though my leg was tied to the leg of a man in Iraq." (1)

Sāliḥ's naive perceptualism seems to assort ill with occasionalism, but both are corollaries of his theodicy: God creates all states of affairs including our perceptions, so the latter must be true. Since there is no connection, causal or material, between one event and another there is no basis whatever for ruling out any logically possible collocation of atoms and atomic accidents. Ash'arī himself plainly regards Sāliḥ's position as untenable and ridiculous, and it is evident that he regarded his own theory of natural dispositions (*qudrat*) and volitional acquiescence (*iklisāb*) as representing very improvements over Sāliḥ Qubba's unqualified occasionalism.

The position Ash'arī ascribes to Abū Ḥusayn al-Sāliḥī is even more extreme. Sāliḥī was a materialist, (2) whose theory of dispositions or capacities anticipated Ash'arī's in several important ways. Nonetheless Ash'arī clearly regarded Sāliḥī as having gone to extremes quite incompatible with his own more naturalistic inclinations. Ash'arī wrote:

Some said: 'An accident predicable of (*yajūzu 'alā*) a collective of substances is predicable of a single one, including such accidents

as, power, knowledge, hearing, and sight.' They held it possible for each of these to subsist in a single isolated atom, and held it possible for power, knowledge, hearing and sight to inhere in an atom along with death, but they ruled it impossible for life to subsist there simultaneously with death. For they said, 'Life is the opposite of death. But power is not. For if power were the opposite of death, impotence would be the opposite of life.' For they held that opposites of opposites are not opposites. They claimed that [visual] apprehension could coexist with blindness but that sight could not, since for them sight was the opposite of blindness. They claimed that life is not the opposite of animateness and that it is possible for God to create life along with total inanimateness. They held it possible for God to strip atoms of their accidents and to create atoms without accidents.

The advocates of this position were the followers of Abū Ḥusayn Sāliḥī. Sāliḥī subscribed to all of the above and went so far as to allow that God can mingle rocks in air time and again without creating burning or the opposite, that God can conjoin cotton and fire without uniting either of them and create neither burning nor its opposite, that God can juxtapose a sound and unimpeded visual sense with an object of sight and create neither [visual] apprehension nor its opposite. But he denied that God could conjoin opposites. They allowed that God could render non-existent the power of a man while he was alive, making him alive but powerless, and that He could obliterate life in a man while his power and knowledge remained, so that he would be aware and capable but dead. They allowed that God could raise the weight of heaven and earth without subtracting any part of them, making all lighter than a feather, but he held it impossible for God to be being to accidents in no place, and he held it impossible for God to obliterate a man's power while his act was in existence, so that he could be acting by a power which was non-existent. (1)

Ash'arī plainly felt that the root of Abū Ḥusayn's difficulty was at least in part in logic, and it is noteworthy that when he set out to propose his own theory of capacities, he modified Sāliḥī's notion of a mono-valent disposition to eliminate the possibility of, say, a man's acting while he was dead (2) or remaining totally immobile when alive in much the way that Sāliḥī himself had ruled out the possibility of activity without capacity. These were steps in the direction of naturalism and away from occasionalism. For even Sāliḥī did not allow that God could cause a man to act without the man being given the power to do so. This in his mind was a matter of logic. But

(1) *Ibid.*, 406-407.

(2) *Ibid.*, 307.14.

(1) *Ibid.*, 309-311.

(2) *Kitāb al-Luma'* ed. and tr. R. J. McCarthy, Beirut, 1953 (by page and paragraph) 80.130.

for Ash'arī logic made the further demand that a dead man to whom God could not act, see, think, while dead. And for Ghazālī, as we shall see, logic made still further demands, beyond what was taken for granted by Ash'arī, Ash'arī himself suggested that substances must be changed if they are to depart from the empirically familiar courses, and he explicitly maintained that one accident could be prerequisite of another. But Ghazālī moved much further in the direction of naturalism than did Ash'arī. For Ghazālī did not accept the basic premises of Ash'arism. He did not accept, for example, the Asharite dogma that the will is a monovalent capacity, capable of choosing only what it does choose.<sup>(1)</sup> For Ghazālī made the opposing Aristotelian doctrine of the will, *i.e.* the doctrine that the will may choose either A or B the cornerstone of his creationist theology.<sup>(2)</sup>

Thus those scholars who follow the lead of Ibn Rushd in not acknowledging a difference between the extreme occasionalism of Ghazālī moots, the Ash'arism by which he resuscitates it and the position he adopted as his own are doing a disservice to the cause of philosophical accuracy and fairness. Ghazālī cites the extreme occasionalist position partly because it was well known and widely discussed in his time, partly because it shows the limits of what can be entertained as a logically coherent possibility. But he also makes very clear that the coherence of the extreme position with ordinary experience can be saved only by attaching to it the Ash'arite sort of qualifications, specifically those invoking the concept of the habitual.

(1) *Ibid.*, 79.127.

(2) *TF* First Discussion, part 1. It might be supposed that since the "first approach" is referred for its grounding to the (theistic) voluntarism Ghazālī defends *a propos* creation that the position is in fact his own, rather than of the *Kaldūn*. But for the voluntarism to which Ghazālī refers is plainly poly-valent rather than monovalent. To this it must be replied that what is Ghazālī's here is the voluntaristic theory, neither the occasionalism which he refers to it for grounding nor the intent to ground an occasionalistic response upon a voluntaristic basis. But it is plainly illegitimate to infer that the exponents of the position Ghazālī moots would have proceeded as he does in modelling the polyvalent capabilities of the divine will upon the polyvalent capabilities of the human will as understood in Aristotelian psychology.

course of God's act and our expectation in nature and less explicitly, some developed theory of natural capacities or dispositions such as that which Ash'arī and, for that matter, even Ghazālī himself up to a point had attempted to introduce. But even having shown that the occasionalist position as modified and qualified by Ash'arī is neither internally incoherent nor inconsistent with acceptance of the veracity of ordinary experience, Ghazālī does not accept it, apparently because he does not believe it assigns sufficient consistency to the creative act of God (which should be wise in Philosophic and/or Quranic terms rather than merely habitual or customary) or sufficient stability to nature, which Scripture and the "most insightful" of the Philosophers had regarded as the expression of the Divine wisdom.

The attempt by Ghazālī's critics to represent the approach he calls the first as his own is conclusively refuted by his outspoken rejection of that approach. It is noteworthy that he encompasses in his condemnation of it not only the extreme occasionalist gambit but also the highly qualified Ash'arite retort by which he saves that gambit from some of its more outrageous implications. For Ghazālī concludes his comments on the first approach with these words: "There is nothing in this entire line of argument but pure absurdity."<sup>(1)</sup> And he opens his discussion of his own approach by referring to it as containing the means of "escape from these absurdities."<sup>(2)</sup> On the whole Ghazālī's critics including Ibn Rushd have ignored this emphatic rejection by him of the extreme voluntaristic occasionalism which he describes.<sup>(3)</sup> One scholar has attempt-

(1) *TF* 200.14.

(2) *TF* 200.15.

(3) Van Den Bergh unaccountably omits the first of the two decisive lines (Bouyges 530.17) from his translation, although it is attested in all the MSS. Ibn Rushd, for his part seems to find it hard to believe that the position first described and then refuted by Ghazālī is not at least in part intended by him to be taken seriously. He appears to have difficulty accepting what he regards as Ghazālī's concession, and represents the more extreme position, which Ghazālī rejects, as more consistent with the views of "the theologians" than the position which Ghazālī actually puts forward. *TT* 537.9-542. One cannot help being reminded of the criticisms Ghazālī encountered from the orthodox on his attempts

ed to reinterpret the word 'tashnī' and 'tashnī' which we translate 'absurdity' and 'absurdities'. But the word is actually quite unambiguous. It refers to what is repugnant, horrible, atrocious, hideous, disgraceful, repugnant or abominable, to give some of the senses collected in the lexicographical work of Wehr, or what is ugly, loathesome, foul, infamous, or hateful, to add what is found by Hava. In Ghazālī's philosophy the word is used to refer to what we would call material as contrasted to formal absurdity, that is positions which are not themselves self-contradictory but which are nonetheless in contradiction to established or accepted facts or at the very least at variance with propositions which one would like to believe or which one has reason to regard as desirable to be established. This last has important bearing on Ghazālī's use of the term for two reasons: (1.) Unlike his rationalist opponents Ghazālī is quite clear in maintaining that there are conditions which are not internally inconsistent (i.e. impossible to affirm without self-contradiction) but nevertheless do not hold in fact. This in fact is his position with regard to the occasionalism he here considers: Ghazālī holds that there is no-self-contradiction in affirming such a view, as the *mutakallimān* who held it had shown quite successfully in arguments which he cites. Indeed his own vindication of creationism to which he here refers is the basis of that claim that it is not inconsistent to regard a perfect God as acting arbitrarily. But this does not require Ghazālī to *apply* his voluntarism with respect to God in the present context. It may well be that like Maimonides he prefers to confine that arbitrariness to the point at which he discovers it, *i.e.* the act of creation. (2.) Ghazālī's use of the theologically freighted term *tashnī'āt* suggests in fact that his reasons for rejecting the extreme occasionalism he describes may be the fact that he regards it (as Ibn Rushd does) as theo-

to describe the views of the Ismailis before refuting them—what if he had done before the refutation had been written. Ibn Rushd seems inclined to judge Ghazālī more on the basis of the views he rejects than on the basis of those he defends. The fate of the *Magdsid al-Falsifa* as a handbook of *Falsafa* among the Latins is apparently emblematic of the reading Ghazālī's works were given in Philosophic quarters.

logically inappropriate to treat God as capricious—for Ghazālī's defense of the divine will, after all, hinged on the rejection of the rationalistic claim that arbitrary action is capricious. At any rate Ghazālī does reject the occasionalism of the "first approach" quite unequivocally despite its logical and psychological coherence and despite the possibility, which he recognizes, of founding it upon his own creationism and voluntarism. His rejection of it quite possibly is for theological reasons, *i.e.* its material incompatibility with a worthy notion of the Divine. Thus it is quite strange that Ghazālī's critics should refer to him as adopting the position he rejects and as doing so for (repentable) theological reasons.

The position Ghazālī actually does adopt is this: "We grant that flame is created with such a nature (*khalqa*) that if two identical pieces of cotton were placed in contact with it, it would set fire to them both and if they were in fact identical in every way it would not affect either of them any differently than the other. Nonetheless we hold it possible that a prophet be in contact with flame and not burn, either on account of a change in the character of the flame or on account of a change in the character of the prophet. There might arise either from God or from the angels a property in the flame which would confine its heat within its own body, preventing it from going further. Thus it would retain its heat and still have the form and essence of fire, but this heat and its effects would not go beyond it. Or there might arise in the body of the person some property which did not restrict him from being flesh and blood but did protect him from the effects of flame." (1).

I fear the talk of angels here again has been something of a red herring, deflecting Ghazālī's critics from anything approaching an adequate appreciation of the magnitude of the concession he is making here. But in fact the angelology here again is very innocent. It is merely Ghazālī's way of saying that the intervention which prevents a given causal sequence from reaching its expected end may well be natural, *i.e.* due to the

(1) *TF* 200.15.

operation of other formal "principles" than those we were observing. He prefers to speak of angels rather than of forms because he does not concede that these principles operate by a logical/ontological automatism as the Philosophers suppose but there, as we have seen, he is on good or well defended ground. Even without recourse to these "principles" of disputed nature the same point can be made: causal patterns may be disrupted by purely naturalistic means.

What is important here is not how Ghazālī chooses to view the ulterior causal principles but rather his concession of accepting in toto the general concept of causality: Ghazālī here accepts the principle that a given cause will have a given effect e.g. that fire will burn cotton and will not differentiate between two like cotton patches. He rests his own reasoning on this assumption when he postulates that there will be no difference in the effect (e.g. the burning) without a difference in the cause (e.g. the fire or the cotton or some facet of the relation between them). This is the fundamental assumption of all scientific investigation, which Ghazālī clearly affirms, despite Averroes' supposition that Ghazālī's critique of the Aristotelian concept of causal necessity would destroy all scientific inquiry and indeed all intelligible discourse.<sup>(1)</sup> In fact Ghazālī's example of what we would call an experimental control (i.e. he does not say that flame logically *must* burn cotton as the Aristotelians had attempted to say but rather that it will not differentiate two identical cotton patches) is predicated on an explicit naturalism, the belief that things may well be created with a certain definite nature (*khalqa*) from which they do not diverge. Ghazālī does not use the Aristotelian term (*tabī'a*) because Aristotelian natures are uncreated and immutable expressions of the eternal logic of the forms, but he does state clearly that things which have a given *khalqa*, that is things which are created in a certain way do not behave arbitrarily, but if they

(1) TT 520. Ghazālī does not in the least retrench on his assertion that a stick can be transformed into a serpent or (more importantly to him) that the dead can be revived. But he insists that this be done naturalistically and in terms the Philosophers would be forced to find quite intelligible: Matter can receive any form. See *TF* 200-202.18-23.

diverge from their familiar patterns there will always be a cause on account of which (the language is his) they do so. This position is unequivocally contradictory to any form of occasionalism represented among the practitioners of *Kalām*. For occasionalism is the doctrine that there is no natural connection among empirical events.

The conceptual kernel of *Kalām* occasionalism is atomism. Being, for the *mutakallim* is an array of dimensionless atoms each of which is in itself totally indeterminate. The reasoning seems to be that of every atom as such one can utter the Parmenidean 'It is' but nothing more. Hence the atoms cannot be extended in space, for then one could say 'It is both here and there.' They cannot be extended in time or endure, for then one might have to say 'It is' twice or find a way of making this truth last longer than an instant. They cannot have any properties, that is essential attributes, for then one could say 'It is *o*' or 'It is *X*.' Rather each is created by God *ad libitum* in a spatio-temporal array, and a set of accidents (i.e. non-essential properties) is at the same instant arbitrarily assigned to each by God. The collocation of atoms in time and space provides the basis for our notion of persistent, extended material objects (although, of course, our notion too is just an accident attaching to one or more of our atoms), and God's customary treatment of the atoms (in say the Ash'arite view) allows us to form (or Him to form for us) an appropriate set of mental habits of expectation which guide us through the practical exigencies of life. Not only matter but time and space are atomistic, since atoms do not really move but are re-created in successive cinematographic loci at successive instants, otherwise one might have to say that the same atom had moved or changed through time and hence that it had endured. But if time and space are quantized in this fashion into discrete instants and loci it is quite clear that there can be no causal relations at least within being," i.e. among the atoms, for that would require motion and spatio-temporal continuity if not contiguity.

In Aristotle's causal system, by contrast, the continuity of space (coextensive with matter) and time (coextensive with change) are the very substance of the causal nexus. A affects

B because A contacts B either directly or through the medium of C. Past, present and future are organically, indissolubly connected, so that every event has both a cause and effect, or as Aristotle himself puts it, both a 'whence' and a 'whither'. Hence it is significant that when Hume wishes to dissolve the extra-mental causal nexus he begins by re-invoking the atomistic conception of time.

Ghazâlî, however, as far as can be determined, rejected the atomistic notion of time, space, and matter. His *Maqâsid al-Fâlâsifa* gives an impressive summary of the geometrical and mechanical paradoxes which the Aristotelian philosophers had used to refute atomism, and he nowhere assumes atomism in his own philosophical argumentation or in any way attempts to refute the Philosophers' rejection of it. The opposing doctrine of spatio-temporal continuity is not among the 20 theses of the Philosophers which Ghazâlî singles out for refutation in the *Tâhâfut al-Fâlâsifa*, although its contradictory was the central tenet of all systems of occasionalism within the *Kalâm*, and although Ghazâlî states explicitly his own agreement with all the theses of the Philosophers which he does not refute here and defends their totally innocuous character *vis à vis* Islam. Even in the context of his critique of the Philosophers' use of matter in buttressing their theories of possibility and necessity, Ghazâlî does not attempt to refute the Aristotelian view that matter is continuous. Nor does Ghazâlî attempt to refute the Philosopher's notion of the continuity of time, but only to expose Aristotle's fallacious inference that the continuity of time implies time's perpetuity. In his discussion of creation Ghazâlî agrees with the Philosophers that time is as old as motion and the world and vice versa. (1) But this doctrine was based upon the Aristotelian conception of time as the measure of motion, *i.e.* the assumption that the two were natural correlates. Now this alone does not commit Ghazâlî to the continuity of time, for both time and motion might be discontinuous. But on the *Kalâm* view there would have been nothing for time to measure, since there is no motion or process extending over

time, so it does seem fairly certain that Ghazâlî did not accept the quantized time of the *Kalâm* or any other aspect of their atomism.

If we seek to examine Ghazâlî's reasons for not following the atomistic approach of the occasionalist *Kalâm*, it becomes evident that the geometrical refutations tell part of the story but that there is also another side. The atomism of the *Kalâm* was plainly and explicitly inconsistent with natural causality, which Ghazâlî explicitly affirms. If we wish to state Ghazâlî's own position as to causality, then he helps us a great deal by stating clearly his agreement with the Philosophers' doctrine (which he takes them to task for not adhering to more strictly) that God is the ultimate cause of all events "either immediately, or more likely through the mediation of principles"—we know from the *Mishkâl al-Anwâr* that the latter is Ghazâlî's actual position) but that one event within nature may be the proximate cause or effect of another and that within the frame of reference of nature and the characters with which things are created, one can even say that proximate causes must have their effects and vice versa unless other causes interfere (as for example when a man insulates his seat before sitting on an oven) (1)—provided it is understood that the "necessity" of proximate causes is not that of logic but only a nature of the relations of things which God has created. Thus Ghazâlî retains causality while rejecting the Philosophers' doctrine of necessity among created causes. If again we ask why he retained causality, I think it would be safe to say that it was motivated by the same rationalistic affection for science that moved the Philosophers, a science which he like them would place in the service of theology as a means of studying and appreciating the wisdom of the divine plan. And he, like them, was probably equally motivated by a distaste for the notion of a capricious or as Ibn Rushd expresses it, a tyrannical God. (2) I think we begin to understand the medieval mode of expression much more clearly when we recognize that both of these

(1) *TF* 200.16.

(2) *TT* 531.

"motivations," i.e. the rejection of a capricious God and the rationalistic love of science are two different ways of speaking of the identical human impulse.

### III

It is in the third phase of his discussion that Ghazâlî makes clear the true intent and scope of his critique of the Philosophers' causal theory. Initially Ghazâlî states that his sole motivation here is the defense of miracles: "This dispute becomes necessary only to the extent that upon it is to be founded the affirmation of miracles which violate the course of the familiar, such as the turning of a staff into a serpent, the reviving of the dead, and the splitting of the moon. Whoever makes the familiar course of things necessary by a necessity of logic (*lâzimâtan luzzûma darâriyyân*—lit. implied by a necessary entailment) renders such events impossible." (1)

But while Ghazâlî speaks in general terms of miracles, it is quite clear throughout his discussion of causality that it is a certain type of miracle he has most prominently in mind, the miracles associated with the initiation and consummation of the world's history and specifically with the creation of life, consciousness, and activity in non-living, inert matter. Thus the three examples cited here, which appear (and no doubt are intended to appear) to be selected casually from the traditional repertoire of scriptural miracles are highly indicative of the focus of Ghazâlî's interest. For the splitting of the moon is an apocalyptic event in Muslim lore. The transformation of a staff into a serpent, which appears to be a plain example of God's intervention of God in nature is more pointedly a case of God making an inanimate object alive (either immediately, as Ghazâlî would say, or through the mediation of angels and, as he puts it elsewhere, numerous intermediate stages.) And

(1) *TF* 192.7. Van Den Bergh translates "it is necessary to contest it on its negation depends..." This all but reverses the sense of Ghazâlî's expression of intent and omits the impact of *innamâ*, *yalzimu*, and *min haythu* upon the sentence.

the resurrection of the dead for judgement is the apocalyptic event par excellence in Islam which had been argued by the Qur'ân itself to be on a par conceptually with the initial creation of human life from inanimate matter. Ghazâlî's other illustrations focus attention in the same direction: The latter is not the cause of life and spirit nor of any of the perceptual faculties in a child; all agree including the neo-Platonic Aristotelians that God is. (1) The real issue, the real "miracle" which is the object of Ghazâlî's concern then is life, consciousness, activity. It is noteworthy that Ghazâlî does not speak of sending 'miracles which violate the course of nature' but rather of 'miracles which disrupt the customary' or the familiar. His discussion up to this point reveals why this is so. Ghazâlî's conception of nature (*khalqa*) is distinct from that of the Philosophers, as a divinely created character of things. What is at issue for him is not whether God can alter that created character but rather whether the familiar pattern of nature's operation, which we have learned to expect habitually in the course of long observation, is itself necessary in the sense that things could never have been otherwise and could never become otherwise. Ghazâlî's answer to that question and the answer which all monotheists inspired by the Biblical tradition would give is, as Maimonides recognized, implicit in acceptance of the concept of creation itself. For the Biblical account of creation demonstrates that it is conceivable that things not be as they are and this was the fundamental point overlooked by the Philosophers. To put the matter in terms of Ghazâlî's paradigm example, if life were an essential and inseparable property of living things, then life would have belonged to all living things perpetually and would be inalienable from them in concept and in fact. It was Aristotle himself who had argued the effect that since consciousness and the perceptive faculties, for example, are not essential to all living beings, nor life or motion to matter, both soul and motion must be "externally" derived. Ghazâlî is simply complementing this argument with his own Qur'anic version of the same theistic claim that if life

(1) *TF* 196.5.

and perception/consciousness can be imparted to non-living matter, then nature cannot be regarded (as the Aristotelian sometimes suggested that it could) simply as a closed deterministic system of mechanical causes interacting according to the necessities of their physical natures. In the interest of fairness we add that this is so whether the physical natures involved are considered on the neo-Empedoclean model or on any other which does not include mental (and Ghazālī would say vital) categories.

Ghazālī's very careful delineation of his theory of the actual limits of possibility and impossibility is in effect a *reductio ad absurdum* of the Philosophers' attempt to base their naturalism on the certainty of logic. For his argument, in effect, is that the Philosophers can find a way of proving on formal grounds that say a stick cannot be made a snake, then they have only succeeded in proving that life is logically impossible. The argument is simply a more sophisticated version of al-Ash'arī's old hypothetical, based on his favorite dialectic in the *Qur'*ān: if creation is possible then resurrection is as well. The argument remains dialectical, but where Ash'arī's premise was the revealed truth of creation, Ghazālī draws the necessary dialectical concession from the heart of Peripatetic doctrine itself, the Aristotelian claim that neither motion nor life nor consciousness is essential to or intrinsic in material things. At that point Ghazālī's argument ceases to be hypothetical and becomes categorical: Whatever emanation renders possible for matter in one case cannot be ruled out *a priori* (i.e. on logical grounds) in any other.

But while Ghazālī does make the Philosophers' claim that matter can receive any form an explicit premise of his argument, it is not his concern, as it was that of the *Mutakallimūn*, to allow for and assume God's constant intervention in the processes of nature. His central concern is with the specific issues of life and consciousness, to which is added the Aristotelian concern with motion in general. How is inanimate, unconscious and immobile matter made capable of life, motion, consciousness? It is in answering this question, which Ghazālī regards as the question about creation (of man and of the world) in the first

instance and of resurrection, inspiration and the natural processes of growth (physical and intellectual) and generation secondarily, that Ghazālī finds it necessary to invoke his voluntarism with respect to God. For things, as the *Mutakallimūn* argued (and it is noteworthy that Avicenna followed them in this) need not have been as they are. But in order to show that this is so and hence to take the religious view of nature ultimately inspired by *Genesis*, it is not necessary for Ghazālī to assume God's continual interference in nature as the *Kalām* had done—for, as he states clearly, the pattern by which events are ordered in their natural sequences is established by God either immediately (occasionally) or mediately (naturalistically). In either case that must be construed voluntaristically, but there is no question that in view of their implications Ghazālī regards the naturalistic view as by far the preferable one.

Certain causal relations, the Philosophers maintain, are matters of logical entailment.<sup>(1)</sup> But this is a point Ghazālī is prepared to concede.<sup>(2)</sup> In this regard as well as in his recognition that one property may be requisite to another or preclude another Ghazālī radically parts company from those occasionalist *Mutakallimūn* who recognized neither logical nor natural interrelationships among events. Where Ghazālī differs with the Philosophers is over their attempt to treat the logical and the natural *nexus* among events as coextensive or identical.

Here is the way Ghazālī expresses the Philosophers' challenge to his view:

'We [sc. the Philosophers are speaking] grant you that everything possible is within God's power, and you grant us that everything impossible is not [for the Ash'arites had made this stipulation]. But some things are recognized to be impossible, some are known to be possible, and with some the mind comes to a halt unable to determine whether they are possible or impossible. Now, what is your definition of impossible?' If it boils down to the conjunction of affirmation and negation of the same thing [i.e. the same state of affairs], then say, 'For two things, this is not that and that is not this, and the existence of neither implies that of the other.' [This in fact is what Ghazālī

(1) TT 520.10-521.3, 11-13.

(2) TF 203-204, 27-29.

had said about the familiar causal pairs, the Philosophers are challenging him to make a universal statement of it. *i.e.* to say that no two non-identical states of affairs imply one another, for that was the position of the occasionalist *kalām*, which they believe Ghazālī to be powerless to differentiate from his own]. Say God can create will without knowledge [*i.e.* consciousness] of what is willed, knowledge without life and can move the hand of a corpse and make him sit up and write volumes with that hand and work with industry with open eye and glance directed toward his work without his seeing or having life in him or any capability of doing what he is about, all these ordered actions being created by God along with the movement of his hand on God's part." By allowing this you destroy the distinction between voluntary motion and an involuntary tremor. The orderly conduct of action would be no indication of consciousness or capability on the part of the doer. And it would follow that God can transform genera, making substance into accident and knowledge into power, turn black to white, sound to scent, the same as He can transform an inanimate into a living being or a rock into gold, and there would be no limit to further impossibilities which would be implied *vis-à-vis* God.' (1)

Here the Philosophers are pictured as arguing that Ghazālī's allowance of the possibility that life be given to the non-living violates the laws of logic in the same way that the occasionalists had done when they maintained that it was possible for a subject say to know without at the same time being alive. The claim is an obfuscation, as Ghazālī makes very clear in stating his acceptance of logical relations of implication and exclusion among certain classes of causal predicates:

Our answer is that what is impossible cannot be done [*i.e.* is not within God's power], and the impossible is the affirmation of a thing while denying it or the affirmation of the more specific while denying the more general. [Here Ghazālī explicitly affirms his acceptance of the categorical logic of Aristotle which had remained foreign to the *Kalām*, quite likely by design (2), proposing that if predicate *o* is implied (or excluded

by predicate *X* that need not be because *o* is identical with (or directly denied by) *X* but may also be because *o* designates a class which is governed by (or excluded from) the more general class designated by *X*] or the affirmation of two things while denying one. What is not reducible to this [*i.e.* to logical inconsistency] is not impossible, and thus is compassable." (1)

The Philosophical objectors Ghazālī pictures do not regard it possible for him consistently to affirm the incompatibility of the affirmation of the specific with the negation of the more general while maintaining the possibility that life might be imparted to a non-living being. Ghazālī's perception of the tenor of their objection is confirmed by Ibn Rushd, who treats Ghazālī's concession that departures from the familiar course of nature must occur by natural/causal means as an unwilling admission of the Philosopher's doctrine and inconsistent with "the theologians'" true position, *i.e.* the "first approach," that of the occasionalist *kalām*. Ghazālī, however, is quite serious in his admission that the more general can logically imply or logically exclude the more specific:

The joining of black and white is impossible because we understand from the affirmation of the form of 'black' in a substrate [N.B. not 'in an atom' as in the *Kalām*, although that might have established the point more unambiguously] the denial of the appearance there of whiteness and the presence of blackness. Since the denial of whiteness has come to be understood from the affirmation of blackness the affirmation of white while denying it would be impossible. (1)

Thus talk of a black-white substance is rendered impossible by considerations of pure logic in view of the implications contained in our general understanding of the terms in question. To attempt to dispense with such implications is, as the Philosophers claim, to render all language and intelligible discourse incoherent. And there are numerous other implications which Ghazālī believes can be established on linguistic grounds alone:

A person cannot be in two places at the same time, solely because we understand from his being in the house his not being elsewhere... in the same way we understand by 'willing' the seeking of something which is known. So if seeking and not knowing is posited, there is no willing, since what we understand by willing has been denied. (1)

(1) *TF* 203.24-26.

(2) For it is well attested that the Syriac Christian translators did not penetrate the *Posterior Analytics* or *Kitāb al-Burhān* (*Liber Demonstrationis*), and they may well have been method in their benign neglect of the categorical syllogism. I am inclined to doubt extremely that the Muslim *Mutakallimūm* struggled with locutions like 'If power were the opposite of life impotence would be the opposite of death' solely out of ignorance of Aristotelian class logic. I think rather that they had a fairly acute awareness of at least some of the potential of the categorical syllogistic but shied away from its apparently intransigent metaphysical implications (or alleged implications), preferring to work with the less developed hypothetical logic which was their hallmark, in part because it was more amenable to the sort of metaphysical control. Ghazālī characteristically despises such shelling for his religious faith.

(2) *TF* 204.28.

(3) *Loc. cit.*

Thus Ghazâlî explicitly denies that volition is possible without cognition; and he refutes the Philosophers' claim that such a position follows from his view by showing that the impossibility of will without knowledge can be defended on strictly logical grounds as well as expressing his own readiness (contrary to the principles of the occasionalist *kalâm*) so to defend it.

"What is lifeless cannot possibly have knowledge created in it," Ghazâlî continues, despite the explicit testimony of *mutakallimûn* to the contrary, "because by lifeless we understand what lacks apprehension. So the creation of apprehension in it while it is designated as lifeless in the sense we have understood is impossible for that very reason." (1) Thus what is posited to be lifeless, according to Ghazâlî logically cannot be posited at the same time to be conscious or aware.

Ghazâlî is equally emphatic as to the irrelevance of the alleged issue of cross-generic transformations. This too, he insists, can be handled entirely in terms of the Aristotelian system of class logic, which he accepts:

As for the transformation of genera, some *Mutakallimân* regard this as compassable by God, but we say: Changing one thing into another is not intelligible. For if black is "transformed" into power, for example, does the black remain or not? If it no longer exists then it has not been transformed but rather this thing has gone out of existence and something else has come to be in its place. But if it still exists alongside power, then it has not been transformed but rather something else has been added to it.... (2)

There can be no clearer testimony to Ghazâlî's rejection of both atomism and occasionalism than this passage, for an occasionalist/atomist could not demand the kind of continuity which Ghazâlî here expects of matter. Rather it was Aristotle who made matter the principle of individuation and the substrate of change, providing the continuity which makes possible the claim that this became that rather than the *Kalâm* assertion that this was simply *replaced* by that. The *mutakallim* cannot restrict the potentiality for change across generic lines precisely because his system does not afford him a continuous substrate.

of change. In adopting the view that matter provides such a substrate Ghazâlî seems even to be going beyond the merely formal position that what is impossible is simply what is contradictory. He indicates that he is aware of a difference here by calling the notion of generic transformations "irrational" rather than "impossible." But he justifies the additional step by the consideration that the type of impossibility considered here is logically even more remote than self-contradiction, for here there is not even a common substrate, so it is not clear what could be meant by black becoming power, which is just what Ghazâlî claims. But to make this claim requires entry beyond the atrium of Aristotelian logic into Aristotelian metaphysics and physics, the theory of identity and change, a step Ghazâlî shows no hesitation in making, despite the radical discordance of the Aristotelian with the occasionalist approach. Similarly, Ghazâlî shows no hesitation about adopting the Aristotelian hylomorphism, although this was equally unacceptable from the point of view of the *Kalâm*: "If we say blood was transformed to semen, we mean the selfsame matter put off one form and put on another. What it boils down to is this: one form is gone, another has arisen, and there is a matter which abides in which the forms are exchanged." (1) This model of change is adopted by Ghazâlî from the Philosophers, and he reminds them of their own assertion that in view of the continuity of matter, even elements can be transformed into one another. Any strange or unaccustomed changes which occur in nature, which we might experience but are powerless in some cases to predict, are simply the results of the natural alterations of matter through the succession in it of alternate forms. There is no canon of logic by which alterations can be restricted *a priori*.

For God to move the hand of a corpse and set him up with the appearance of a living person who sits and writes, so that by the motion of his hand an organized book is produced, is not impossible in itself long as we refer the outcome to the will of a voluntary being. It seems implausible only because the continual course of the familiar is against it. (2)

(1) *Loc. cit.*

(2) *TF* 205.30.

Ghazâlî has a very particular reason for stating his conception of the limits of possibility in terms of this particular rather bizarre example. His reason, as we learn from the 35th book of the *Ihyâ 'Ulûm al-Dîn*, is that in his view the phenomenology of the human condition for the monistic mystic who represents the highest phase of monotheism (*tawhîd*) is not far removed from the condition this example describes. Indeed for Ghazâlî the conception of man as "the corpse in the hands of the washer" is a central religious motif well suited to the development of a proper appreciation of the nature of finite existence in relation to God. This of course does not imply that Ghazâlî is a fatalist who conceives of man solely in terms of passivity. On the contrary much of what we have read in this chapter and elsewhere in Ghazâlî's writings suggests that he believed (as did Muhammâd) that God acts through man and nature rather than around them or despite them. But Ghazâlî's doctrine of what constitutes what he calls a voluntary agent is not the object of our present inquiry. Rather the question we asked is 'Did Ghazâlî deny causality?' And we have seen quite clearly from a thorough examination of his discussion on the subject that even in the course of affirming the reality of the miraculous, of which the paradigm for Ghazâlî was the mystery of life and intelligence being imparted to what is in itself lifeless and inert matter—quite consistently he did not.

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